

Standards

Material No.	EN Designation	AISI/SAE	UNS
1.4749	X18CrN28	446-1	S44600

Description

AISI 446-1 / 1.4749 is a heat resistant ferritic chromium stainless steel with niobium in addition.

Special properties

Resistant to scaling up to 1100°C. Resistant to oxidizing sulphuric gases.

Chemical Composition

C %	Si ≤ %	Mn ≤ %	P ≤ %	S ≤ %
0.15-0.20	1.00	1.00	0.04	0.015
Cr %	N %			
26.0-29.0	0.15-0.25			

Mechanical Properties 20°C

Hardness HB 30 ≤ HB	0.2% Yield strength R _p ≥ N/mm ²	Tensile strength R _m N/mm ²	Elongation A ₅ ≥ %	Resistant on air up to °C
212	280	500-700	15	1100
Modulus of elasticity kN/mm ²				
200				

Physical Properties 20°C

Density g/cm ³	Specific heat capacity J/kg K	Thermal conductivity W/m K	Electrical resistivity Ω mm ² /m
7.7	500	17	0.7

Suitable welding filler materials

1.4773; 1.4820; 1.4842

Application

Industrial furnace construction

Available forms for 1.4749 / AISI 446-1

Sheets/Plates	Tubes/Pipes	Fittings
		